

REMARKS

The Official Action mailed May 22, 2003, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for Two Month Extension of Time*, which extends the shortened statutory period for response to October 22, 2003. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statement filed on August 23, 2002.

Claims 1-51 were pending in the present application prior to the above amendment. Claims 4, 23 and 40 have been canceled, claims 1, 3, 16-19, 22, 33-36, 39 and 51 have been amended to correct minor typographical and grammatical errors, and new claims 52-58 have been added to recite additional protection to which the Applicants are entitled. Accordingly, claims 1-3, 5-22, 24-39, 41-58 are now pending in the present application, of which claims 1, 18, 35, 55 and 57 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested. The Applicants note with appreciation the allowance of claims 35-51 and the indication of the allowability of claims 2, 3, 5, 21, 22 and 24 (page 8, Paper No. 3).

Paragraph 1 of the Official Action objects to claims 4, 24, and 40 asserting that the limitation "the impurity element" lacks antecedent basis. In response, claims 4, 24 and 40 have been canceled; therefore, the objection is now moot.

Paragraph 3 of the Official Action rejects claims 1, 4, 6-20, 23, and 25-34 under the doctrine of obviousness-type double patenting over the combination of claims 12, 14, 16 and 17 of U.S. Patent No. 6,204,101 to Yamazaki et al., U.S. Patent No. 6,337,259 to Ueda et al., and U.S. Patent No. 6,077,731 to Yamazaki et al.

As stated in MPEP § 804, under the heading "Obviousness-Type," in order to form an obviousness-type double patenting rejection, a claim in the present application must define an invention that is merely an obvious variation of an invention claimed in the prior art patent, and the claimed subject matter must not be patentably distinct from

the subject matter claimed in a commonly owned patent. Also, the patent principally underlying the double patenting rejection is not considered prior art.

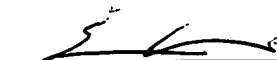
The Applicants respectfully traverse the obviousness-type double patenting rejection because independent claims 1, 18 and 35 of the present invention are patentably distinct from the claims of Yamazaki '101, either alone or in combination with Ueda and Yamazaki '731. Specifically, the independent claims of the present invention recite selectively adding a rare gas element to the semiconductor film having a crystalline structure to form an impurity region. The Official Action asserts that Yamazaki '101 teaches "selectively adding a rare gas element to the semiconductor film ... to form an impurity region" (pages 3 and 7, Paper No. 3). The Applicants respectfully disagree and traverse the assertion in the Official Action. The claims of Yamazaki '101 recite either "performing a second heat treatment at a higher temperature than said first heat treatment, and in an atmosphere comprising at least a material selected from the group consisting of Ar, N₂, He, and Ne," or "heating said crystallized semiconductor film at a higher temperature than said crystallizing step, and in an atmosphere comprising at least a material selected from the group consisting of Ar, N₂, He, and Ne." However, the claims of Yamazaki '101 do not recite adding a rare gas element to the semiconductor film, as required by the independent claims of the present invention.

Ueda and Yamazaki '731 do not cure the deficiencies in Yamazaki '101. The Official Action relies on Ueda to allegedly teach removing an impurity region (Id.), metal elements for crystallization (page 4, Id.), and various formation steps (page 7, Id.). The Official Action relies on Yamazaki '731 to allegedly teach irradiation with a strong light or laser (page 5, Id.), and various formation steps (page 6, Id.). Ueda and Yamazaki '731 do not teach or suggest selectively adding a rare gas element to the semiconductor film having a crystalline structure to form an impurity region. Therefore, the claims of Yamazaki '101, either alone or in combination with Ueda and Yamazaki '731, do not teach or suggest at least selectively adding a rare gas element to the semiconductor film having a crystalline structure to form an impurity region.

The Applicants respectfully submit that the subject application is patentably distinct from the claims of Yamazaki '101, either alone or in combination with Ueda and Yamazaki '731. Reconsideration of the obviousness-type double patenting rejection is requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,



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